Attorney Docket No. 254-094-PCT-2-USCIP-1

AK Matter No.: 153673

IN THE SPECIFICATION:

Please replace paragraph 92 on page 24 of the as filed specification with the following paragraph:

[0092] FIG. 14 is an alternative preferred embodiment of the present invention. Depicted in FIG. 14 are base element 120 and support elements 140 and 160 with all of the depicted ICs being packaged in CSP with support elements 140 and 160 extending beyond the physical boundaries of base element 120. Form standard 34 provides a standard form about which flex circuit 30 arcs. As earlier described, form standards may take a variety of forms and, in this embodiment, form standard 34 is folded to increase cooling surface area while providing an appropriate axial circumference and standard form for flex circuitry 30. Also shown is extensive and preferred use of conformal underfill media 41.

Please replace paragraph 98 on page 26 of the as filed specification with the following paragraph:

[0098] The identified lower flex contact 54 44 at the level of second conductive layer 58 is connected to a via 59 by a trace 71. Via 59 passes in a relatively upward direction toward the body of base element 120. As via 59 passes upwardly through flex circuitry 30, it contacts a conductive area at the level of first conductive layer 54 as shown in FIG. 17 by the identification of via 59 in the field 69. The identified via 59 is then connected to trace 73 that provides a connection network to a variety of other contacts in the depicted embodiment. Thus, the use of two conductive layers is given an added flexibility by the illustrated use of vias through an intermediate layer.

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Please replace paragraph 101 on page 27 of the as filed specification with the following paragraph:

In this embodiment, heat spreader portion 194 is a central portion of [00101] form standard 34, which is disposed between the depicted CSPs and may extend past the lateral extent of one or both of the designated ICs, as shown by the dotted Heat spreader portion 194 and radiating form portions 192 may be composed of similar materials or they may be composed of a different suitable heat-conducting materials. Further heat spreader portion 194 and radiating form portions 192 may be made in a variety of ways. For example, the depicted IC's may first be attached to flex circuitry 30 in a flat configuration with a radiating form portion 192 placed about each depicted IC, then heat spreader portion 194 placed atop base element 120 and the selected radiating for form portion 192, and affixed with adhesive or other suitable attachment methods such as, for example, tape adhesive, liquid adhesive, soldering, welding, or clamping. Subsequently, flex circuitry 30 may be folded to produce the relative positions shown in FIG. 19. Adhesive or other suitable attachment methods may be used to secure radiating form portion 192 associated with support element 140 to heat spreader portion 194. As those of skill in the art will understand, after appreciating this specification, radiating form portions 192 and heat spreader portion 194 may be separate pieces that are placed adjacent to each other in a manner devised to achieve a form Further, as those of skill will understand, in an alternative standard 34. embodiment, radiating form portions 192 may be disposed around one or both of the depicted CSPs without the presence of heat spreader 194 between the depicted CSPs.

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Please replace paragraph 111 on page 31 of the as filed specification with the following paragraph:

FIG. 26 depicts an assembly stage, later than that depicted in FIG. 25, [00111] of another embodiment of the present invention. While a preferred scheme of assembling an exemplar embodiment of the invention is depicted by this and related Figures, the order is not limiting and, as those of skill will realize after appreciating this specification, various embodiments of the present invention may Base element 120 has upper surface 224. be assembled in various orders. Radiating form portions 192 are shown disposed around base element 120 and support element 140 ("the depicted CSPs"). The separation distance D and the connection of radiating form portions 194 192 to flex circuitry 30 and may follow the description made with regard to FIG. 22. In this embodiment, radiating form portions 194 192 of form standard 34 are metal pieces with form curves 262 and form tabs 264, which will be further described with reference to FIG. 27. In other embodiments, radiating form portions 194 192 may be made of suitably rigid and heat conducting materials such as, for example, various metals, alloys, and composites.

Please replace paragraph 112 on page 31 which continues on page 32 of the as filed specification with the following paragraph:

[00112] FIG. 27 depicts an assembly stage, later than that depicted in FIG. 25, of another embodiment of the present invention. In a preferred embodiment, heat spreader portion 194 is made of copper and has a thickness of approximately 1mm. The depiction in FIG. 27 has the same orientation as that in FIG. 26. In this embodiment, heat spreader portion 194 is shown placed on upper surface 224 of base element IC 120. Heat spreader portion 194 of form standard 34 may be fixed

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to upper surface 224 of the respective CSP with an adhesive which preferably is Heat spreader portion 194 may also, in alternative thermally conductive. embodiments, merely lay on upper surface 224 or be separated from upper surface 224 by an air gap or medium such as a thermal slug or non-thermal layer. The lateral extent of heat spreader portion 194 is preferably greater than the lateral extent of one or both of the depicted CSPs, and preferably, in this embodiment, greater than the largest lateral extent of radiating form portions 192 in each of the three lateral directions shown in which heat spreader portion 194 has a mount 272. Preferably, mount 272 has thermally conductive properties. In this embodiment, heat spreader portion 194 has mounts 272 extending from three of its four sides. The fourth side, in this embodiment, has no mount 272 and instead presents a side edge 276 that is preferably flush with the outside edge presented by the adjacent form curve 262. Preferably, heat spreader 194 touches form curve 262 in a manner devised to promote thermal conduction. Mounts 272 preferably extend in a downward direction with respect to upper surface 224 of base element 120 (FIG. 26), and preferably extend past the radiating form portions 192. Flex circuitry 30 has portion 'F' that is folded in a later stage of assembly from that depicted in FIG. 27. Form tabs 264 of the radiating form element portions 192 that is underneath heat spreader 194 are preferably in contact with the lower surface of heat spreader 194 (not visible in this depiction) in a manner devised to provide mechanical support and heat conductivity.

Please replace paragraph 115 on page 33 which continues on page 34 of the as filed specification with the following paragraph:

[00115] FIG. 29 depicts an early assembly stage of yet another embodiment of the present invention. In this embodiment, flex circuitry 30 flex circuitry 30 is has flex

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extensions 292 and 294. Support elements 140 and 160 are disposed on flex extension 292 and 294, and may, at the depicted stage of assembly, be attached by various ways such as, for example, soldering, solder paste, adhesives, and laminate adhesives.

Please replace paragraph 116 on page 31 which continues on page 32 of the as filed specification with the following paragraph:

FIG. 30 depicts an assembly stage, later than that depicted in FIG. 29, [00116] of another embodiment of the present invention. While a preferred scheme of assembling an exemplar embodiment of the invention is depicted by this and related Figures, the order is not limiting and, as those of skill will realize after appreciating this specification, various embodiments of the present invention may be assembled in various orders. In this embodiment, flex extensions 292 and 294 are depicted wrapped about form standard 34. Base element 120, not visible in this depiction, is underneath form standard 34 with its upper surface 224 adjacent to form standard 34. In this embodiment, form standard 34 has folded portions 304 and 306, devised to present support and heat absorption surfaces on which support elements 140 and 160 rest. In this depiction, support elements 140 and 160 are inverted with respect to their depiction in FIG. 29, due to the folding of flex extensions 292 and 294. While in this embodiment, flex circuitry 30 is shown with two flex extensions, this is not limiting and other embodiments may contain one or two or three or more flex extensions which may be devised to provide flexible circuit connectivity to each other and/or base element 120 and/or the operating environment of module 10. Further, while in this embodiment form standard 34 has two folded portions 304 and 306, other embodiments may have one or two or three or more folded portions, and such portions may be devised to provide support

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and/or heat absorption for support elements 140 and 160, and may be devised to present surfaces for attachment and/or support and/or heat absorption for support elements 140 and/or 160 that may be horizontal or vertical or disposed at other angles with respect to base element 120. While folded portions 304 and 306 are shown in this embodiment, form standard 34 may be made in a folded configuration or be made of solid material or material shaped with voids of various shapes devised to provide heat radiation and/or ease of manufacturing. In this embodiment, folded portion 206 306 is shaped with a contour to provide for support elements 140 and 160 that may have different heights. Form standard 34 has radiating portions 302 disposed partially around its outside edges.